

IN THE SPECIFICATION

Please amend the specification beginning at page 11, line 1, and ending at page

Change(s) applied

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to document, 14, line 35 as follows:

/R.O.P./

3/7/2011

Examples

For better understanding and in order to illustrate the invention, examples are reproduced below, also in the form of pictures which show the cleaning result. The compositions used are within the scope of protection of the present invention. The examples thus also serve to illustrate the invention. Owing to the general validity of the inventive principle described, however, the examples are not suitable for reducing the scope of protection of the present application merely to these.

The temperatures given in the examples are always in °C.

Example 1

Reference (post-ash residue) before cleaning: see vias of Figure 14 and AlCu lines of Figure 15.

Vias

AlCu lines



The cleaning is carried out with an aqueous cleaning solution comprising the following components:

- citric acid 5%
- hydrogen peroxide 2%
- NMP 1%
- Tween 20 1000 ppm

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Please amend page 14, lines 13-30, as follows:

Brief Description of the Drawings Explanation of figures:

Figure 1: Vias before PER cleaning.

Figure 2: Vias after cleaning for 5 minutes - tank unit.

Figure 3: Vias after cleaning for 20 minutes - spray tool (Semitool SAT).

Figure 4: AlCu lines and vias after cleaning for 5 minutes at 45°C with a DSP solution (dilute sulfuric acid/peroxide) - spray tool (Semitool SAT).

Figure 5: Plot of mass removal of a sputtered Al/Cu layer as a function of exposure time. The solution used consisted of an aqueous solution of 5% of citric acid, 2% of peroxide, 1% of NMP. The dark curve shows removal without corrosion inhibitor. The pale line shows removal with addition of a corrosion inhibitor.

Figure 6: Plot of mass removal of a CVO-deposited tungsten layer as a function of exposure time. The solution used (see Figure 5).

Figure 7: Via and AlCu lines after cleaning for 20 minutes at 60°C with a solution of 5% tartaric acid, 1% NMP and 1000 ppm of enanthic acid.

Figure 8: Vias and AlCu lines after cleaning for 20 minutes at 60°C with a solution of 5% tartaric acid, 1% DMSO and 1000 ppm of enanthic acid.

Figure 9: Vias and AlCu lines after cleaning for 20 minutes at 60°C with a solution of 5% tartaric acid, 1% PGMEA and 1000 ppm of enanthic acid.

Figure 10: Via and AlCu lines after cleaning for 20 minutes at 60°C with a solution of 5% maleic acid, 1% NMP and 1000 ppm of enanthic acid.

Figure 11: Via and AlCu lines after cleaning for 20 minutes at 60°C with a solution of 5% maleic acid, 1% DMSO and 1000 ppm of enanthic acid.